

### REMARKS

In reply to the Office Action of January 18, 2007, Applicant submits the following remarks. Claims 1, 9 and 24 have been amended. Support for the amendments to claims 1 and 9 can be found at least in the specification as filed at page 6, in the last paragraph, which continues on the top of page 7. Applicant respectfully requests reconsideration in view of the foregoing amendments and these remarks.

#### Claim Identifiers

Applicant notes that in the response to the office action of August 4, 2006, applicant amended claim 28 to replace "air" with "air-leg". Applicant failed to change the "previously presented" to "currently amended". Applicant requests that the amendment to the claim be entered, if this has not been done already, even though the wrong identifier was used in the previous action.

#### Claim Objections

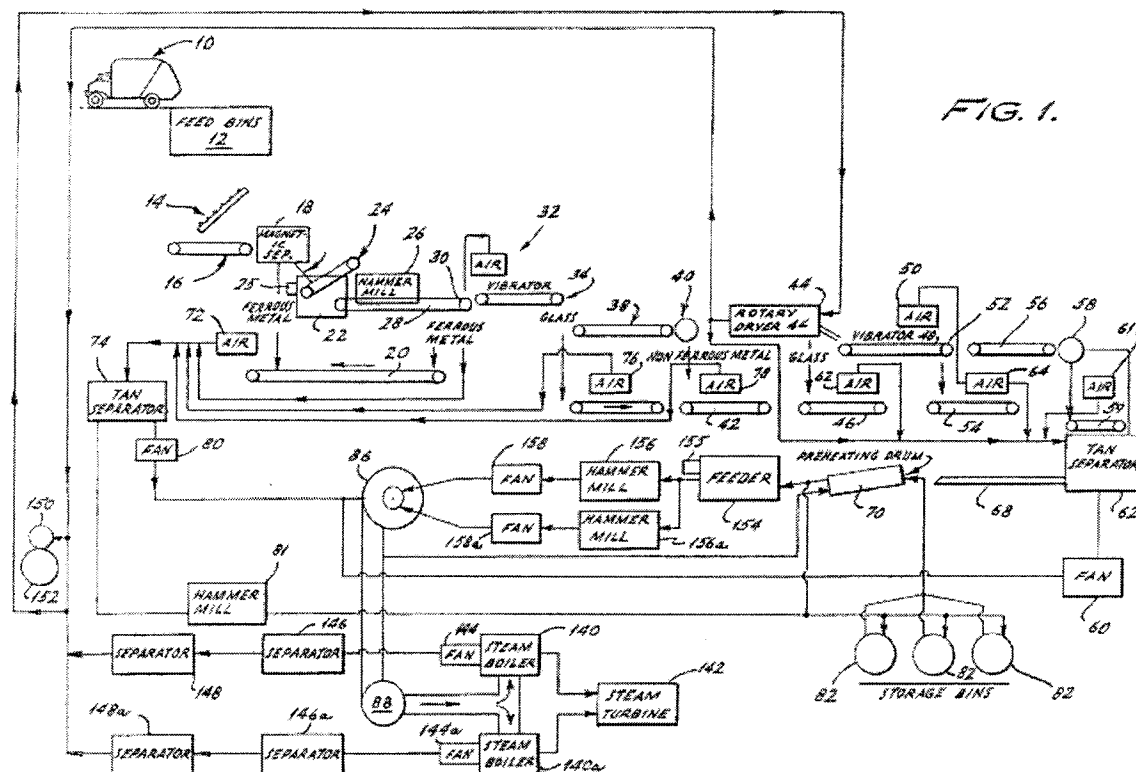
Applicant thanks the Examiner for pointing out the typographical error in claim 24. The claim has been amended as suggested by the Examiner. Applicant believes this addresses the objection.

#### Section 103 Rejections

All of the pending claims have been rejected as obvious over U.S. Patent No. 4,015,546 ("Paules") alone or in combination with the applicant's admitted prior art. The applicant respectfully traverses because of the difference between the air leg separator described by Paules and the air-leg separator as required by claim 1 as amended, claim 9 as amended and claim 29, and the air-leg separation device required by claim 17.

Paules describes a system where "ferrous material is collected on a conveyor 20 over which is located an air leg separator 72 which separates light particles of combustible refuse" (col. 5, lines 23-26). "A blower 80 pulls the particles through the air separators 32, 72, 76 and

78.” (col. 5, lines 40-41). The air leg separators in Paules appear to work like a vacuum. That is, the air leg separators are positioned over a mixture of ferrous material and light material on a conveyor belt (col. 5, 23-47). As the mixture is moved along the conveyor belt, the light material is sucked up from the belt while the ferrous material remains on the belt and is moved to the next component in the system. FIG. 1 further demonstrates the movement of the material through the system, including the functioning of the air leg separators as vacuums. FIG. 1 is reproduced below for the Examiner's convenience.



Amended claim 1 requires an air-leg separator configured to receive the plastic-rich feed mixture and to entrain light materials and allow heavy materials to fall through the air-leg separator. As noted above, the air leg separator in Paules only draws in the lighter materials from a mix of material on a conveyor belt. Paules' air leg separator does not receive a mixture and allow heavy materials to fall through the separator. Therefore, applicant submits that the air leg separator described by Paules is a different device from the air-leg separator required by

amended claim 1. Applicant therefore submits that no *prima facie* case of obviousness stands after amendment of claim 1. Claims 4-6, 13-16 and 24-28, which depend from claim 1, are similarly not obvious over Paules.

Claim 9 as amended requires a step of feeding a plastic-rich feed mixture into an air-leg separator to separate metal materials from the plastic-rich feed mixture and to form the coarse and/or heavy stream, wherein the plastic-rich feed mixture includes metal materials.

Paules does not describe feeding a plastic-rich feed mixture that includes metal materials into an air-leg separator. Rather, Paules' air-leg separator is positioned over a mixture of materials to pull the lighter materials from the mixture and allow the heavier materials to pass by the separator. For at least this reason, applicant submits that no *prima facie* case of obviousness stands after the amendment of claim 9. Claims 10-12 depend from claim 9, and are similarly not obvious over Paules.

Claim 17 requires adding a mixture of plastics and metals to an air-leg separation device, wherein the moving air entrains light or thin materials in the mixture and allows heavier or thicker components to fall within the separation device.

Paules does not describe adding a mixture of plastics and metals to an air-leg separation device, wherein the moving air entrains light or thin materials in the mixture and allows heavier or thicker components to fall within the separation device. Rather, Paules describes an air-leg that pulls lighter materials from a mixture and allows the ferrous materials to pass by the air-leg separator without being pulled through the air-leg separator. For at least this reason, applicant submits that no *prima facie* case of obviousness exists with respect to claim 17 and the claims that depend therefrom, including claims 18 and 21-23.

Claim 29 is directed to a method of separating a mixture. The method requires adding a waste mixture containing shredded plastics and metals to an air-leg separator, wherein moving air within the air-leg separator entrains light components in the mixture and allows heavy or thick components to fall within the air-leg separator.

Paules does not describe adding a waste mixture containing shredded plastics and metals to an air-leg separator, wherein moving air within the air-leg separator entrains light components

in the mixture and allows heavy or thick components to fall within the air-leg separator. For at least this reason, applicant submits that no *prima facie* case of obviousness exists with respect to claim 29 and the claims that depend therefrom, including claims 30-33.

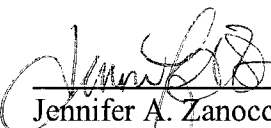
The Examiner argues that a person of ordinary skill in the art could use the air leg separator described by Paules to modify the system described in the applicant's background (the admitted prior art) to create a system method as claimed by the applicant. However, as applicant points out, the air leg separator described by Paules is a different type of device, that is, the device has a different configuration and a different mode of operation, than the air-leg separator or air-leg separation device required by the applicant's claims. Therefore, applicant respectfully submits that no *prima facie* case of obviousness stands in light of the amendments to claims 1 and 9 and over the rest of the claims as pending over the admitted prior art in view of Paules.

Applicant respectfully requests withdrawal of the obviousness rejections.

Please apply any required charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: April 16, 2007

  
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